Students' Invention Aids Safe Childbirth

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A group of Tulane bioengineering graduates and a professor have applied for a patent for an inexpensive device that could prevent millions of infection-related neonatal deaths in developing countries.

The small device, called SafeSnip, is designed for use in regions like Southeast Asia and Africa where home births are common and infants are susceptible to infections caused by unsanitary birth conditions. SafeSnip is a three-inch disposable, plastic clamp that cuts, seals and disinfects an umbilical cord in one step.

"You take the umbilical cord in one hand and just clamp down on it," says William Kethman, who applied for the patent with fellow 2008 School of Science and Engineering graduates Bryan Molter, Stephanie Roberts and Mark Young, as well as David Rice, associate professor of biomedical engineering.

After the cord is severed, SafeSnip breaks in two, leaving one half of the device firmly clamped onto the baby's umbilical cord to seal the wound while the other is discarded.

The students developed the device in Rice's class as part of a course project and won $5,000 in funding from the Wal-Mart Foundation through the Clinton Global Initiative University; they also got $500 from the National Collegiate Inventors and Innovators Alliance.

The students hope to start field-testing the device once the patent is approved. The patenting process could last a few years, Rice says. He and his former students have reached out to companies to see if they would be interested in mass-producing the device for further testing. SafeSnip would retail for under $1.

Rice has tapped current student Michael Liu to shepherd the SafeSnip project going forward. Kethman is now a second-year medical student at Tulane and Roberts is in her second year at Tulane Law School. "That's the biggest obstacle to this project, that we're grad school students now," Kethman says.

The patent filing was done through the Tulane Office of [Technology Transfer and Business Development](#).